

PHALLODRILUS VESCUS, NEW SPECIES
(OLIGOCHAETA, TUBIFICIDAE) FROM THE
GULF OF MEXICO

Christer Erséus

Abstract.—*Phallodrilus vescus* (subfamily Phallodrilinae) is described from the continental slope of the northern part of the Gulf of Mexico. The species is distinguished from the closely related *P. davisii* Erséus, 1984 by (1) its fewer setae, (2) its very small anterior prostate glands, (3) its very short penial papillae, and (4) the markedly narrow inner part of its spermathecal ampullae.

Species of Phallodrilinae from the northern Gulf of Mexico continental slope, originating from a project at LGL Ecological Research Associates, Inc. (Bryan, Texas), were recently described by Erséus (1988). Subsequently, further material was sent to this author for identification. Three worms proved to represent an additional new species of *Phallodrilus* Pierantoni, 1902, which is described herein.

The specimens, weakly stained in Rose Bengal, were mounted whole in Canada balsam by the author. They are deposited in the United States National Museum of Natural History (USNM), Smithsonian Institution, Washington, D.C.

Phallodrilus vescus, new species
Fig. 1

Holotype.—USNM 118716, from south of Louisiana, 27°49'36"N, 90°07'06"W, 841 m (12 Apr 1984).

Paratypes.—USNM 118717, 118718, one from type locality, and one from 27°49'24"N, 90°07'00"W, 840 m (12 Apr 1984).

Etymology.—The epithet *vescus* is Latin for "thin, slender," a feature of the new species.

Description.—Length (two complete, fixed specimens) 3.4–5.6 mm, 31–38 segments. Width at XI (compressed, whole-mounted

specimens) 0.08–0.13 mm. Prostomium rounded triangular, pygidium blunt-ended, clitellum extending over ½X–XII. Setae (Fig. 1A) bifid, with upper tooth slightly thinner and shorter than lower. Setae 35–50 μ m long, 1–1.5 μ m thick, three per bundle anteriorly, two per bundle in postclitellar segments. Ventral setae absent from XI. Male pores paired in line with ventral setae, posterior to middle of segment X.

Pharyngeal glands poorly developed. Male genitalia (Fig. 1B) paired. Vas deferens about 5 μ m wide, long and coiled, entering apical end of atrium. Atrium comma-shaped, about 30 μ m long, about 15 μ m wide, with thin outer (muscular) lining and thick, granulated inner epithelium; ciliation not seen. Anterior prostate gland small, inconspicuous, located near junction between vas deferens and atrium. Posterior prostate gland large, conspicuous, attached to ectal part of atrium. Atrium terminating in small penial papilla, about as long as wide (10–15 μ m), enclosed in simple penial sac. Spermathecae (Fig. 1B, s) slender, 65–90 μ m long, consisting of short, 11–13 μ m wide ducts, and 11–18 μ m wide ampullae; latter with inner end very narrow in (at least) two of the specimens studied. Lumen of ampullae inconspicuously and irregularly incised in a few places. A few spermatozoa, arranged in a bundle, present in each ampulla.

Remarks.—This species is distinguished

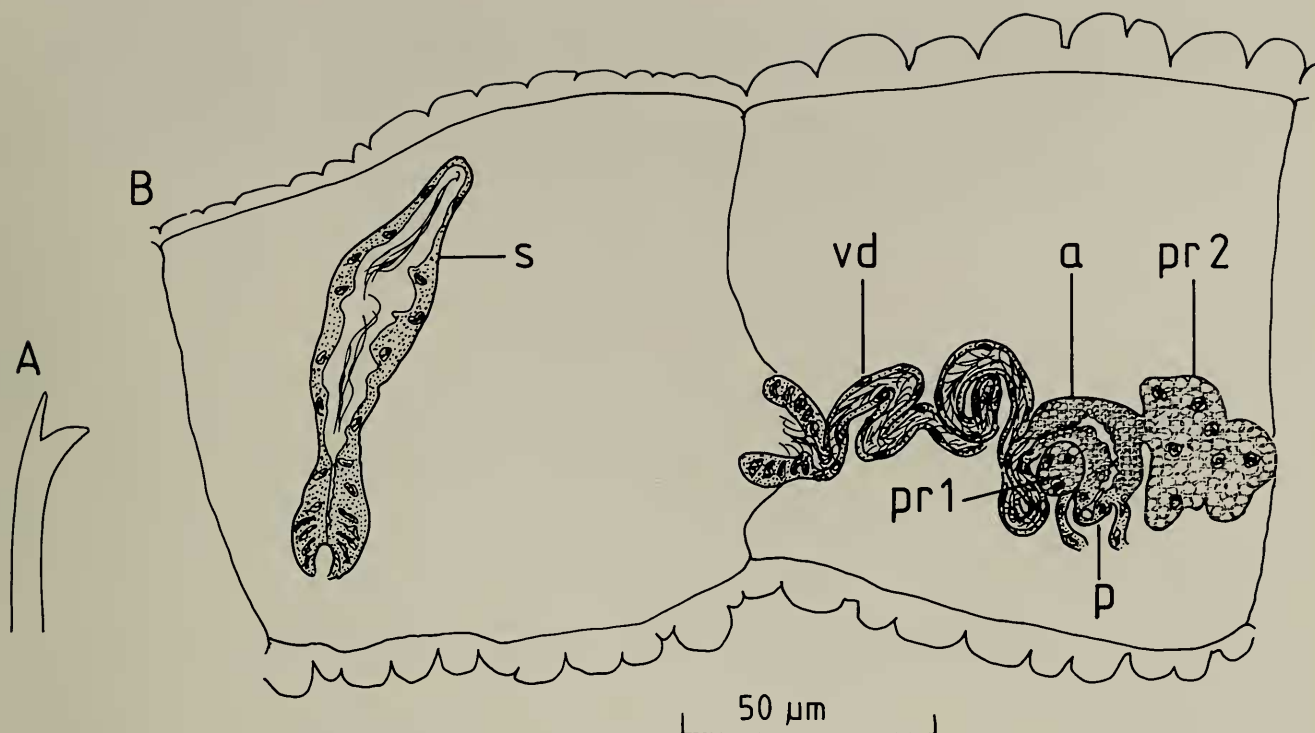


Fig. 1. *Phallodrilus vesus*: A, Free-hand drawing of somatic seta; B, Lateral view of spermatheca and male genitalia in segments X–XI. Abbreviations: a, atrium; p, penial papilla; pr 1, anterior prostate gland; pr 2, posterior prostate gland; s, spermatheca; vd, vas deferens.

from the closely related *P. davis*, described by Erséus (1984) from sublittoral depths (78–80 m) off Massachusetts, by: (1) having only two setae per bundle in postclitellar segments (up to four setae in *davis*), (2) its very small anterior prostate glands (in *davis*, these glands are conspicuous and in fact larger than the posterior prostates), (3) its very short penial papillae (penes slender and conspicuously hollow in *davis*), and (4) the narrow inner end of its spermathecal ampullae (these ends rounded, not markedly narrow in *davis*).

The genitalia of *P. vesus* bear resemblance to those of *P. constrictus* Erséus, 1988, which also occurs on the upper continental slope in the northern Gulf of Mexico (Erséus 1988). The latter species, however, possesses a very thick muscular lining on the atria, copulatory sacs and spermathecae; penial setae in segment XI; and a very distinct constriction on the male ducts between the atria and the copulatory sacs; these features are all absent in *P. vesus*.

The spermathecal ampullae are markedly

incised or compartmented in *P. davis* (Erséus 1984:fig. 6B) and *P. constrictus* (Erséus 1988:fig. 1C). A similar, but less developed, compartmentalization is present in the spermathecae of *P. vesus* (Fig. 1B).

Distribution and habitat.—N Gulf of Mexico. Upper continental slope sediment, 840–841 m.

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Zoo-Tax, Swedish Museum of Natural History, Stockholm, and (postal address): Department of Zoology, University of Göteborg, Box 25059, S-400 31 Göteborg, Sweden.